

Click here for  
[DISCLAIMER](#)

Document starts on next page



# OMSAPC ADVISORY CIRCULAR

U.S. ENVIRONMENTAL PROTECTION AGENCY  
OFFICE OF AIR AND WASTE MANAGEMENT

---

A/C NO MC-4

July 20, 1977

PAGE 1 OF 4 PAGES

---

SUBJECT: Break-In Operations and Scheduled Periodic Maintenance

A. Purpose

The purpose of this advisory circular is to outline for motorcycle manufacturers the criteria by which EPA will normally approve:

- (1) break-in operations (that is, the unique service accumulation schedules and maintenance required to break in a new motorcycle), and
- (2) scheduled periodic maintenance other than that specifically allowed by the regulations for certification test vehicles.

B. Background

1. Several manufacturers have requested that a modified service accumulation be employed during the vehicle break-in period. Break-in driving instructions are usually prescribed in the owner's manual and recommend a maximum vehicle or engine speed for a specified distance. Alternate service accumulation procedures may be approved under 40 CFR 86.426-78.

2. Manufacturers have indicated that some motorcycles will require break-in maintenance (e.g., cam timing chain adjustment) to be performed only during initial distance accumulation. Manufacturers have also indicated the need for scheduled periodic maintenance items, or intervals, other than that specifically allowed by the regulations. Under the provision of 40 CFR 86.428-78(f), EPA will approve such maintenance if the manufacturer can show that it will be performed on in-use vehicles and is reasonable and necessary.

3. In order to adequately represent in-use performance, certification test vehicles should receive the same break-in operations or scheduled periodic maintenance that occurs in the field. Thus, a manufacturer wishing to perform break-in operations or other scheduled maintenance, should demonstrate that it will be necessary and performed on in-use vehicles in order to perform such maintenance on his certification vehicles.

C. Applicability

This advisory circular is applicable to manufacturers of 1978 and later model year motorcycles.



D. Criteria for Approval of Break-in Operations or Scheduled Periodic Maintenance on Test Vehicles

1. In general, EPA will determine that break-in operations or scheduled periodic maintenance on test vehicles is reasonable based on manufacturer's demonstration of the likelihood of its being done in-use, the incentive for the customer to follow the recommendations, the availability of equipment and tools in-use, and the cost associated with the maintenance.

2. Two separate situations may exist for which a manufacturer must provide assurance that it is reasonable that recommendations will be followed by the ultimate purchaser for break-in operations or scheduled periodic maintenance. In the first case, adequate historical data may exist to substantiate that the break-in operations or scheduled periodic maintenance occurred on a high percentage of in-use vehicles. In the second case, historical data may not exist to adequately substantiate the occurrence of break-in operations or scheduled periodic maintenance. Therefore, in this second case additional information will be required to supplement the available data.

a. In the case where historical data exist, the manufacturer must show that a number approaching 90% of the in-use vehicles in an engine family received the break-in operations or scheduled periodic maintenance for which approval is requested. Data from previous model years may be used in applying for future model years when break-in operations or scheduled periodic maintenance are very nearly the same as, or identical to, past model years. Some examples of data which might be appropriate are:

- 1) Dealer warranty validation data,
- 2) Surveys of representative samples of dealers or independent service facilities, and
- 3) Owner survey data.
- 4) Data comparing the cost between the proposed and the historical break-in operations or scheduled periodic maintenance.

b. In the case in which historical data do not substantiate that break-in operations or scheduled periodic maintenance were performed on a high percentage of the in-use vehicles in past model years, additional assurance will have to be given that the break-in operations or scheduled periodic maintenance will be performed on the vehicle for which approval is requested. A manufacturer may give additional assurance by showing incentive exists for the purchaser to follow recommendations made by the manufacturer.



1) Where the proposed break-in operations or scheduled periodic maintenance are not the same as that for which historical data exist, the historical data may be used to help substantiate that the proposed break-in operations or scheduled periodic maintenance will be performed. Historical data may be used if the incentive for having proposed break-in operations or scheduled periodic maintenance performed can be shown to be comparable to the incentive for having done break-in operations or scheduled periodic maintenance in the past.

2) Where the historical data do not adequately support the contention that a number approaching 90% of the in-use vehicles received break-in operations or scheduled periodic maintenance, the historical data may be used to help substantiate that such break-in operations or scheduled periodic maintenance will be performed. However, in combination with the historical data available, the manufacturer must provide EPA assurance that the incentive in-use to have the proposed break-in operations or maintenance performed will be greater than in the past. If the incentive for having the proposed break-in operations or scheduled periodic maintenance performed can be shown to be greater than in the past, the additional incentive will help provide assurance that the proposed break-in operations or scheduled periodic maintenance are more likely to be performed than the historical data indicate.

3) Some areas which might be appropriate to indicate the incentive for customers to have the break-in operations or scheduled periodic maintenance carried out are:

- a) Free maintenance,
- b) Minimal inconvenience to the owner,
- c) No charge, or low cost, associated with scheduled maintenance other than the proposed maintenance at the regularly scheduled interval (e.g., free oil change when vehicle is brought in for break-in maintenance to emission and engine system), and
- d) Promotional programs which stress the need for break-in operations or scheduled periodic maintenance.

3. The manufacturer must demonstrate that any specialized equipment and facilities required for performance of the maintenance are currently available at dealerships and other service outlets. If such equipment is not currently available, the manufacturer must show that it will likely be acquired by the service industry (e.g., the equipment is reasonably priced, readily available and easy to use).

4. The break-in operations or scheduled periodic maintenance must be recommended in writing to the ultimate purchaser of the motor vehicle.



5. The necessity for the manufacturer's proposed recommendations for break-in operations and scheduled periodic maintenance will be evaluated based on the state-of-the-art of the technology being used and technical experience with maintenance or break-in requirements for the motorcycle industry and, where applicable, related industries. In general, approval will be granted if EPA determines that the maintenance is required to be performed to adjust for in-use wear or mechanical degradation in order to assure continued adequate emissions performance.

E. Testing Associated With Approved Break-in and Scheduled Periodic Maintenance

1. Complete emissions tests are required before and after any maintenance which may reasonably be expected to affect emissions unless the test is waived by EPA (ref. 40 CFR 86.428-78(h)).

2. Accordingly, emissions tests before and after maintenance occurring prior to the minimum test distance ( $2500 \pm 250$  km for Classes I and II;  $3500 \pm 250$  km for Class III) are hereby waived. The minimum test distance is the first point at which a vehicle's emission levels are considered stabilized.

3. If the break-in maintenance or scheduled periodic maintenance is performed at the minimum test distance, the before maintenance test is hereby waived. Only an after maintenance test is required. The after maintenance test results then constitute the first official test.

4. Results of tests waived by Section E.2 and E.3 above, if conducted by a manufacturer after notification (by issuance of this advisory circular) that such tests are waived, must be used in the calculation of the deterioration factor, unless specifically excluded by EPA (ref. 40 CFR 86.432-78).